WHIRRAKEE

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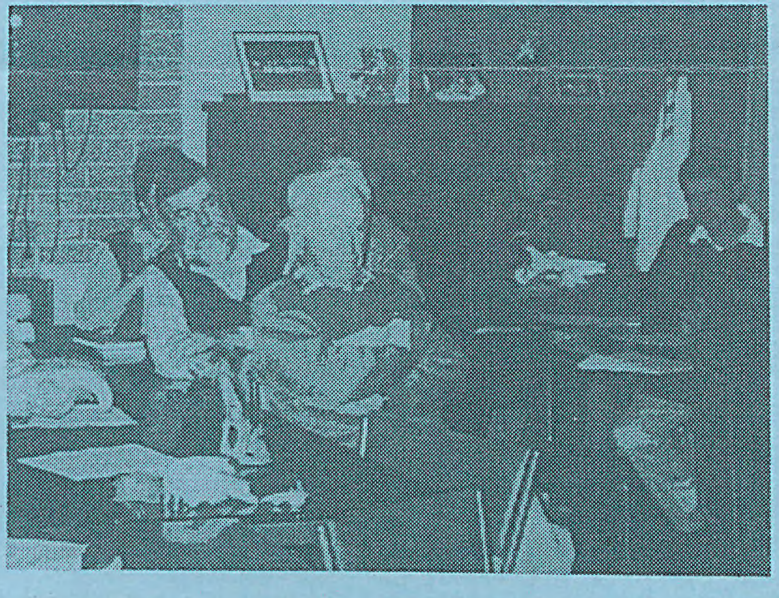

MONTHLY NEWSLETTER OF THE BENDIGO FIELD NATURALISTS CLUB

Bendigo Field Naturalists Club Inc.

Address for correspondence: PO Box 396, Bendigo 3552

Office Bearers for 2001 - 2002

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Membership of the Bendigo Field Naturalists Club is open to all those interested in Natural History. The subscription rates are: Single $34; Family $40; Concession: Single $28.50; Family $34. *Whirrakee* subscription only is $34. These rates include GST.

General meetings are held on the second Wednesday of each month. The venue for General meetings is the Golden Square Senior Citizens Building, Old High Street, Golden Square. The invited speaker at general meetings starts at 8:00pm and meetings conclude with supper.
If a workshop is held prior to the meeting, it will be advertised and it usually starts at 7.00pm.
The Annual Meeting is held in September.

Committee meetings are held on the third Wednesday of each month at 7:30pm. Members of the Committee are the Office Bearers listed above, together with the following members:
Kate Lottkowitz; Trevor Marshall; Rob Moors, Jan Orr, Stan Pelczynski; Bob Ruddick

Excursions Excursions are conducted irregularly and are advertised on the diary page of the *Whirrakee*. The assembly point for excursions is the Golden Square Senior Citizens Building, unless otherwise specified. In addition to local excursions, campouts are held several times each year, usually coinciding with long weekends or holiday periods.

The Bendigo Field Naturalists Club has one active sub-group:

Mammal Study Group: meets on the fourth Wednesday of the month at 7:30pm in the Golden Square Senior Citizens Building.

Chairman: John Burtonclay, Fadersons Lane, Mandurang (5439 5710)
Secretary: Bill Holsworth, 13 Nabilla Crs., Bendigo (5443 4063)
Equipment Officer: Maurie Lewis (0407 427179)

Front Cover: Photographer: Sabine Wilkens

The photo shows the attentive audience at a workshop last year. The workshop title was 'Bones in the Bush' but Bill Holsworth who conducted the workshop, also brought some unexpected specimens (for example, we were able to hold an elephant's tooth – something not found in the bush every day). This month we will have a workshop on water plants....see back cover.

WHIRRAKEE

Monthly Newsletter of the Bendigo Field Naturalist Club

Vol. 23, No. 3, April 2002

Whirrakee takes its name from the Whirrakee Wattle (*Acacia williamsonii*) which is virtually endemic to the Bendigo region

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Authors are responsible for the accuracy of the information they use and also for any opinions expressed in their articles.
Contributions will be included as soon as possible after they are received, although articles received more than one week after the monthly General Meeting will probably be too late for inclusion in the next issue of *Whirrakee*.
Articles in *Whirrakee* may be reproduced, but permission should be obtained from the Bendigo Field Naturalists Club, and acknowledgment should be given to the author and the Club. Some back issues are still available on request.

Editors' Note
Every March, the annual bat trapping by the Mammal Study group occurs at Lake Weeroona. The report just got in before this edition was taken to the printers (see page 5), hot off the press to you.... Please note the earlier starting time for the general meeting this month due to a workshop being held prior to the advertised speaker. It is fantastic to see the workshops appearing again. I hope for many more this year. Matthew Comer who is conducting the workshop is also organising the next Highway Clean-up on the 14th April. Please consider attending this very worthwhile and social occasion – it usually includes some field-natting as well.

BENDIGO FIELD NATURALISTS CLUB
NATURAL HISTORY NOTES

BATS in the BENDIGO AREA

By W. N. Holsworth

Bats are the only group of mammals that can truly fly. There are nearly 1,000 species found on all continents except Antarctica. Most of the 75 Australian bats have close relatives Asia. In scientific terms they belong to the Order Chiroptera (pronounced 'kirop-tera, meaning hand-wing). The 2 Suborders are the Megachiroptera (large hand-wing), which includes the fruit and blossom bats, and the Microchiroptera (small hand-wing), which includes the insect eating bats as well as a few species with special food getting techniques such as the vampire bats and fish and frog eating bats.

This information sheet is about the small insect eating bats common in the Bendigo area. They all use echolocation to hunt insects and find their way about and they have a tail and membrane between the back legs. Fruit bats do not eat insects, do not use echolocation, have no tail or membrane between the back legs, and are only rarely found in the Bendigo region.

Common and Scientific Names* of Bendigo's Bats

White-striped Freetail Bat	*Tadarida australis*
Southern Freetail Bat	*Mormopterus planiceps*
Gould's Wattled Bat	*Chalinolobus gouldii*
Chocolate Wattled Bat	*Chalinolobus morio*
Large Forest Bat	*Vespadelus darlingtoni*
Southern Forest Bat	*Vespadelus regulus*
Little Forest Bat	*Vespadelus vulturnus*
Inland Broad-nosed Bat	*Scotorepens balstoni*
Lesser Long-eared Bat	*Nyctophilus geoffroyi*
Gould's Long-eared Bat	*Nyctophilus gouldi*

*Names from Menkhorst 2001. In older books names may be different. Since the common names are no more familiar than the scientific names reference to these species will follow the usual convention in zoology; the Genus will be indicated only by the initial letter.

Identification of Bendigo's Bats

Identification of these 10 species requires close examination, meaning that you need to capture the bat or find an injured or dead specimen. The biology and behaviour of the 10 species of bats in Bendigo are similar and they are all about the same size. If you really want to identify a bat, you should consult one of the books suggested for Further Reading. However bat names are not the most important thing to know. First learn about the biology and ecology of Bendigo's bats.

Behaviour

Because bats are nocturnal and most roost in dark, inaccessible places little is known about their social life. Males and females often roost in separate locations especially when the female is pregnant or lactating. Studies of bats, tagged with small metal bands on their forearm, have shown that groups of bats often stay together for years. Sometimes they change roosting sites frequently, but at other times they use the same roost for months or years.

Using recently developed small radio transmitters it is possible to follow individuals for several days and learn exactly when and where they feed and rest. In general, nightly activity patterns are bimodal in summer with a 2 or 3 hour peak in activity starting at dusk and a secondary peak 3 hours before dawn. On cold nights, especially during the winter when few insects are flying, bats remain in the roost and save energy by hibernating.

How and where bats hunt and what they eat depends on the bat's size, wing shape, and echolocation frequency used. Larger bats can eat larger insects than smaller bats but all the insect eating bats around Bendigo are about the same size (5g to 18g) except *T. australis* which weighs up to 37g.

Some species have broad wings, others narrow wings, and some in between. Broad-winged species fly more slowly but can twist and turn easily as they hunt among the branches of trees. At the other extreme are bats with long narrow wings, like those of a swallow or swift, that fly fast and straight over open areas. Bats flying among the branches need to 'see' details close up and accurately so they use very high frequency sound for echolocation. Bats flying in the open need to 'see' a long way ahead and so they use a lower frequency sound because it travels further.

Echolocation

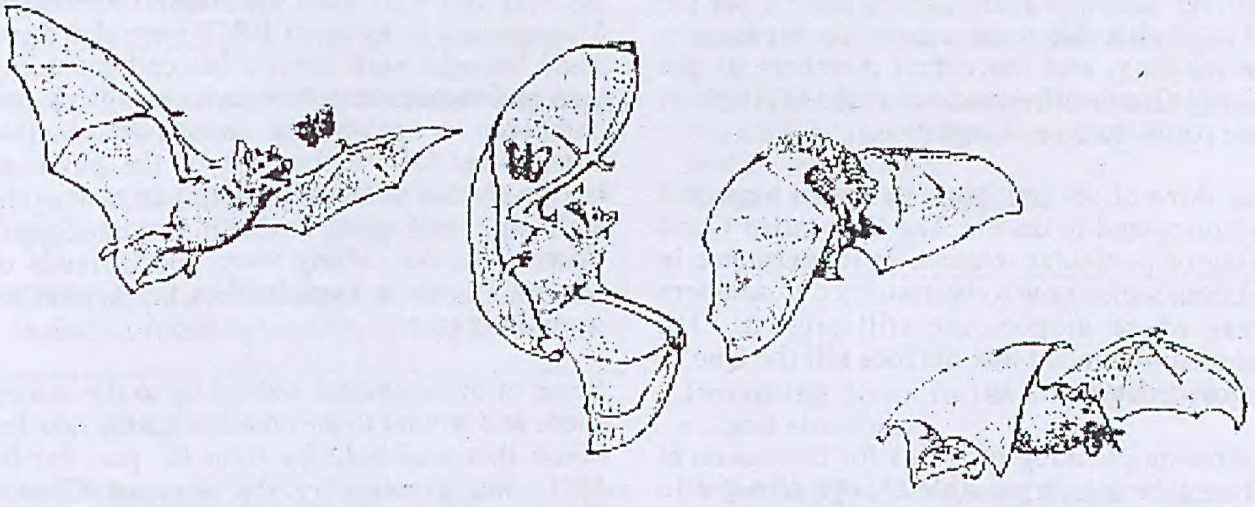
Bats use high frequency sound (ultrasound) to 'see' their surroundings and to locate and capture insects. Most bats emit sounds that are very loud but above the range of human hearing (more than 25kHz). One species, *T. australis*, uses a frequency (11kHz) that we hear as a regular metallic ting ...ting ...ting ...ting. When this bat is chasing and catching an insect what you hear is a series of faint clicks that are repeated faster and louder, ending with a short buzzing sound as the insect is captured. The bat hears the echo from the clicks to locate, chase and capture the insect. It also uses the echoes from the clicks to 'see' trees, branches, and roost entrances.

Other bat species make calls similar to *T. australis* but at frequencies most of us cannot hear. *M. planiceps* and *C. gouldii* make echolocation sounds that some children, and a few adults, can hear. Electronic bat detectors have been developed that converts the high frequency sound to an audible frequency. With a detector and a computer program it is possible to identify most of the bats and know what they are doing.

Feeding Habits and Habitat

Insectivorous bats eat mostly moths, beetles, flying termites, and mosquitoes. They are usually opportunistic feeders taking whatever insects are most abundant. However, because insect species prefer different locations and each bat species has attributes, such as size, wing shape and echolocation call frequency that favour hunting in different localities, there is some specialisation. To summarise the significance of these differences and similarities scientists group these bats into 5 guilds.

1. *T. australis* and *M. planiceps*: Fast aerial feeders foraging high above canopy or in large gaps beside the canopy. Low manoeuvrability.
2. *C. gouldii*: Medium-fast aerial feeders foraging close to and above canopy or in gaps beside the canopy. Low manoeuvrability.
3. *V. darlingtoni* and *N. balstoni*: Medium to slow aerial feeders foraging below, inside and beside the canopy and sub-canopy. Medium-low manoeuvrability.
4. *V. vulturnus*, *V. regulus*, *C. morio*: Medium to fast aerial feeders foraging below, inside and beside the canopy and sub- canopy. Medium-high manoeuvrability.
5. *Nyctophilus* sp.: Forage inside canopy, sub-canopy and shrub layer, feeding on non-flying food as well as flying insects. Low speed with high manoeuvrability.



Active bats will eat about 25% of their body weight in insects each night. Pregnant and lactating females may eat close to 50%. That might mean 10 to 20 mosquitoes per minute for 4 hours.

Life Cycle and Reproduction

Baby bats must be born when insects are most abundant, so most are born between October and January. Pregnancy lasts about 3 months. In order to start the pregnancy in late August, when they are inactive or the males are hibernating, female bats copulate in April and store the sperm in their vagina until they ovulate in August. *T. australis* is an exception. It does not store sperm, rather it migrates north and breeds in a warmer climate. Pregnant females often congregate in maternal colonies where their combined body heat reduces their energy costs. Well designed bat houses make good maternal roosts.

At birth, baby bats weigh 25% to 30% of their mother's weight. They feed on milk from the teats located under their mother's arms. At 3 months they start flying. Juvenile females breed in their first year but young males take 2 years to become sexually mature. Some species regularly have twins.

Roosting and Hibernation Sites

Most bat species in Bendigo roost in man-made structures, but their natural roosts are under loose bark, in fissures, hollows or in spouts of trees. Some species prefer large dead trees, other use only dead spouts of living trees. Because bats shift roosts regularly they need an abundant choice. These places are also important to many birds and mammals in the Box-Ironbark forests around Bendigo. Conservation of wildlife depends on forest management leaving many large habitat trees.

Economic Value

Bats in houses can have their entrances closed but this should be done to prevent bats getting in, and not done in a way that prevents them from leaving.

In some parts of the world bats carry diseases that are harmful to man, but insectivorous bats in Victoria have not been found to be dangerous.

Bats eat a lot of insects that we find annoying or that affect our fruit crops. A bat house is a better and cheaper way of controlling insects than an electric bug zapper or using insecticides. The Bendigo Field Naturalists Club and the Department of Natural Resources and Environment can suggest suitable bat house designs and local builders of bat houses.

Further Reading

Churchill, S. 1998. **Australian Bats.** Sydney: New Holland Publishers.

Menkhorst, P. W., ed. 1995. **Mammals of Victoria: distribution, ecology and conservation.** Melbourne: Oxford University Press.

Menkhorst, P. W. 2001. **A Field Guide to the Mammals of Australia.** Melbourne: Oxford University Press.

Wilson, D. E. 1997. **Bats in Question.** Melbourne: CSIRO Publishing.

This pamphlet is sponsored by the **Bendigo Field Naturalists Club Inc.** P. O. Box 396 Bendigo, 3552

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Report – Mammal Study Group Meeting 27th February 2002

Author: Kerrie Norris

Matt McDonald representing the One Tree Hill Environment Group (OTHEG), spoke concerning the enhancement of One Tree Hill's environment with the aim to sustain the local fauna and flora. General discussion evolved, drawing upon the knowledge gained form nest box surveys. Be it furred, feathered or insectile, its preference of hollow-dwelling habits was discussed in terms of prime real estate – frontage, size, neighbourhood clustering and location, location, location. The subject of weed control and planting ensued a healthy debate, emphasising the significance of wattles in providing nectar for sugar gliders and seed and shelter for Bronze-winged pigeons.
Especially when other resources are depleted, the significance of exotic natives such as Cootamundra Wattle needs to be considered, and will, no doubt, provide endless debate for the OTHEG also. Matt was thanked for his input to the meeting, and individual members of the Survey Group offered to assist the OTHEG in their particular area of expertise.

The skins of several mammals were inspected and discussed in detail. The Spot-tailed Quoll being of particular interest, as its existence in Victoria seems now to be restricted to southern areas where dingoes are still present. Ian Fenselau reminded that dingoes kill the Quolls major predator – foxes.

Following planning of topics for discussion at future meetings, a possible change of name to the *Fauna Group* was muted, at which point the meeting was called to a close to make way for supper.

The following meetings are planned for this year:
Meetings take place at 7:30pm at the BFNC Clubrooms.

April 24 Hollows, their significance and occupants. Slides and overhead projector will be used to contribute to general discussion of knowledge and observations.

May 22 Native Fish - John Grills

June 26 Leadbeaters Possum - Speaker to be confirmed

July 24 Mountain Pygmy Possum - Kerrie Norris

August 28 Frogs by Night - on location at Kangaroo Flat Botanical Garden

September 25 A.G.M. - topic of interest to be announced.

Bat Trapping Report

by Bill Holsworth

On 27 March 2002 at Lake Weeroona, Bendigo, the Mammal Study Group surrounded the old picnic pavilion with mist nets just as it had done for 12 of the past 14 years. About 15 Club members were there to help and watch, and to have a BBQ dinner and visit. Another 15 students and staff from the Natural Resources Management program of BRIT were also there. They brought with them a bat call recording system that included a sensitive microphone and computer to convert the sounds into visible sonograms. Off to the side of the pavilion, having an end of term breakup party, were the staff and their children from Golden Square Primary school. Many were good friends of Maurie Lewis he explained to them what we were about to do.

Some of our members walked up to the rowing sheds and around to the creek to see the new bat house that was built by John B., paid for by NRE and erected by the City of Greater Bendigo. It was put in place last week and we will be checking on it every couple of months to record when it is first occupied. It has been designed so bats can be caught and examined.

The weather was warm, only a light wind puffed its way from the street to the lake carrying with it the scent of passing traffic. The moon had not yet risen. It was a perfect night. By 7:45 mist nets surrounded the pavilion. I gave a short talk on the bat species in Bendigo, explained how their wing shape determined where each species could hunt most effectively and what type of echolocation sound each would use in those habitats. Diet, reproduction, longevity and other matters were also highlighted.

We waited for the bat. Every year, except last year, Gould's Wattled Bat (*Chalinolubus gouldii*) have appeared just before 8pm. Last year no bats came to our net. Was this year to be a repeat? Unfortunately, Yes!

Korrak Korrak Grassland Reserve

On Tuesday 12 March, a BBQ dinner and guided spotlight walk with plant and reptile experts launched the new property purchased by Trust for Nature. The property totalling 246 hectares was bought with assistance from the Natural Heritage Trust and the RE Ross Trust. It consists of native grasslands on the Avoca River floodplain and represents habitat for one of Australia's most threatened birds – the Plains Wanderer. The purchase of the property also ensures permanent protection for many rare and threatened plant species.

A full report of the event will follow in a later edition of *Whirrakee*.

Past, Present and Future Bird Observers Group Members.....

April 24 at 6:30pm, BFNC Clubrooms
(preceding the Mammal group meeting)

Could all people interested in birds please meet to discuss future options for birding activities.

VFNCA NEWS

The Victorian Field Naturalists Executive for 2002- 2003 consists of the following people:

President: Dick Southcombe, Geelong FNC
Secretary: Helen Langley, Timboon FNC
Treasurer: Jane Bradbury, Ringwood FNC
Committee: Noel Schleiger, FNCV
Jane Cleary, Bendigo FNC
Wendy Savage, LaTrobe Valley FNC

The next camp-out will be conducted by FNC Ballarat Friday 25th October - Sunday 27th October. The camp-out will be self-accommodating.
Activities will be based at the Horticultural Centre, corner of Gillies St and Gregory St.
Lake Wendemere Caravan Park is the suggested accommodation.

This year the Ballarat Club is celebrating its 50th Anniversary. A book is to be published of areas of interest to visit in the Ballarat area.

The future camp-out program is as follows:

Spring 2002	FNC Ballarat. (Oct 25-27)
March 2003	Urban camp, Royal Park Melbourne (to be organised by Bendigo FNC)
Spring 2003	Portland FNC
March 2004	Timboon FNC
Spring 2004	Little Desert, Bendigo FNC are assisting with the organisation.
March 2005	Western Port – Peninsula FNC

Victoria's Plants First Revealed: Robert Brown in Port Phillip 1802

A symposium celebrating the bicentenary of the voyage of Matthew Flinders to New Holland in 1801 - 1803, and the visit to Port Phillip by Robert Brown and Ferdinand Bauer in April 1802.
18th April KPMG Conference Room, Level 5 161 Collins Street Melbourne, 2-8pm
Further information:
Karen Lockyer 03 92522355

Promising News in the *Bendigo Advertiser* .....and elsewhere

by Barbara Pelczynska and Sabine Wilkens

There have been some promising articles in the *Bendigo Advertiser* lately. On Thursday 7/3/02 an article appeared with four happy people toasting to the photographer. These were Rod Orr, Stuart Fraser as well as Graeme and Lucy Reed. They were toasting to the State Governemnt's confirmation of the expanded Box-Ironbark Park for Bendigo. The Greater Bendigo National Park is one of 11 parks to be created by the Government in response to the Environmental Conservation Council (ECC) recommendations.
Legislation will not come before Parliament until the Spring session.

Another article on Saturday 23/3/02 reporting on the protest "Rally for Your Rights" has Sheryl Garbutt reassuring protesters that their concerns will be listened to, but reaffirming that the legislation will go through in the Spring session. Ms Garbutt was quoted as saying that they had gone through a very thorough five-year process during which many concerns were heard and listened to, before coming up with the final recommendations. The Minister compared the forest issue with the controversial Grampians National Park proposal of the mid 1980s. "There were rallies and concerns then, but now, no-one will dispute the importance of the park."

It was a delight to see that on that same Saturday an aeroplane wrote into the sky above Bendigo

PARKS NOW!

I am sure that a lot of people feel that way.

The *McIvor Times* (27/2/02) reported the change of status of the Goornong cemetery bushland from a 'Gravel Reserve' to a 'Bushland Reserve'. This change came about due to intense campaigning by district residents and conservationists. Pictured in the article were Julie Howard, Barbara Beattie and Matthew Comer. The site contains a number of large old trees that are vital in supporting wildlife in the area dominated by farmland.

The Tasmanian Experience

by the Australian Naturalists Network

This year's ANN *GetTogether* in Tasmania will be happening November 9-18, 2002. The core program is based in Launceston, with pre-meeting activities centred around the North-East/East Coast (November 6-9) and post-meeting activities around North-West/West Coast (November 19-22).

Although the official booking deadline has passed, there is still time for others to join the program provided they make their own travel and accommodation arrangements.
A bus has been arranged for all trips of the 9 day core program for $120 per person which includes morning tea and entry fees to the National Parks visited during the period. Some additional costs are incurred for the core program.

If you are interested in details of this tour (the core program is summarised below), or you would like a copy of the participation form (to be filled out by every person) or any of the merchandise offered by ANN (shirts, windcheaters, stickers, signs), please contact Bill Holsworth on 5443 4063.

ANN is also considering publishing a calendar of the diversity, and more importantly inter-dependence, of Australia's flora and fauna. If you are interested in contributing suggestions to this idea, please contact Bill Holsworth.

The core program: 9-18 November, 2002

Saturday 9 November
GetTogether will begin at a local venue at 7pm for Registration, welcome to Launceston.

Sunday 10 November
Duck Reach walk and lunch in Cataract Gorge (Launceston); afternoon visit Notley Fern Gorge

Monday 11 November
Day Field trip to George Town/Low Head mud flats for wading birds; visit coastal heathland.

Tuesday 12 November
Full day field trip to Narawntapu National Park on North Coast; walks to beach or Archers Knob; lagoon bird watching; close-up view of native animals grazing in open; BBQ; view Tasmanian Devils feeding at night.

Wednesday 13 November
Excursion to Skemps, LFNC property at Myrtle Bank - walks; easy day.

Thursday 14 November
Excursion to Seahorse World, Tamar Wetlands Centre - walk to Tamar Island (2 hours return).

Friday 15 November
Full day trip to Cradle Mountain; see Sheffield Murals on the way.

Saturday 16 November
Excursion to Liffey Falls, Habitat Plant Nursery; Cheese factory; Raspberry Farm.

Sunday 17 November
Day field trip to Evercreech White Gums Reserve & Mathinna Falls; dinner at night at restaurant and hand-over to 2004 host group.

Monday 18 November
Visit Heritage Forest Launceston for final luncheon picnic.

The **pre- and post-meeting tours** are both fully catered and cost $320 and $340 per person respectively.

Places visited by the pre-meeting tour include Bridport, North-East Park Scottsdale, Weld-

borough Pass, myrtle forest, Blue Tier, St Columba or Halls Creek Falls, St Helens, Peron Dunes, Scamander Winifred Curtis Reserve, Bicheno, Apsley Bridge, Native Pine Reserve, Friendly Beaches, Freycinet National Park, Coles Bay, Wineglass Bay, Lake Leake Rd and Meetus Falls.
Places visited by the post-meeting tour include Arthur River (West Coast), cruise and rainforest walk, Stanley; Roger and Julius Rivers, Milkshake Hills Reserve, Lake Chisholm, the Nut, Dip Falls, the Big Tree, Gunns Plains Caves, Pindari (South Riana).

From the Mailbag
Author: Elaine Mathison

Each month the club receives a number of newsletters and magazines: some by subscription and some in exchange for Whirrakee. These are available from the club library.

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THE VICTORIAN NATURALIST(FNCV)
October & December 2001

These issues have been produced in honour of the life and work of the nineteenth century Irish-Australian naturalist Sir Frederick McCoy, who was the first president of the Field Naturalists Club of Victoria (1880-1883). He later became patron of the Club.

At the time of his death in 1899 McCoy was considered to be Australia's most distinguished scientist. Today he is little known beyond the areas of palaeontology and the history of science. This collection of papers provides a starting point for reassessment of McCoy's life and work.
Some of the topics covered are:

- McCoy's Living Museum
- Birds, Books and Money: McCoy's Correspondence with John Gould.
- McCoy's Mammals
- McCoy's Contribution to Graptolithology
- McCoy and the Australian Ichthyosaur
- The Fate of the Cranbourne Meteorites

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PARK WATCH(VNPA)
March 2002

- Edithvale-Seaford Wetlands and Karkarook Park: two degraded sites have been reclaimed and now form Victoria's eleventh Ramsar site.
- The Brisbane Ranges' forgotten jewel: the process involved in adding the decommissioned Anakie Water Supply Reserve to the National Park. Also outlines history, and engineering involved in the construction of the system
- Mornington Peninsula National Park: looks at the problems that arise for park management in an extremely popular area.
- The Big Bits: managing National Parks in Victoria points out that we must not only focus on the endangered species and areas but cherish the large intact natural areas as well
- One hundred years later: Scotland's new National Parks: Deirdre Slattery reports on the surprising discovery that at present there are no national parks in Scotland.

* * * * * * *

Also received recently:

*Castlemaine Naturalist(CFNC)
March 2002
*Ballarat Naturalist(BFNC)
March 2002
*Geelong Naturalist(GFNC)
March 2002
*Newsletter(Maryborough FNC)
August 01-March 2002
*Field Nats News(FNCV)
March 2002

* * * * * * *

March General Meeting
Botanical Explorers in Australia – Speaker Dr Sophie Ducker

Author: Sabine Wilkens

This was a fantastic evening, full with details about the early explorers, their incredible determination and hardships as well as their professional triumphs; in short, the sort of historical information one could get get stuck into researching after retirement. This is obviously what Sophie Ducker has done.....

The earliest reports of Australian plants came to Europe from the Dutch explorers (being the first white people to have landed on Australian shores). So new and unusual was this new flora that some gros mis-identifications occurred early on. Sophie had some slides which showed, for example, a wattle, now known as *Acacia truncata*, which had been identified as a maiden hair fern (*Adianthum truncatum*) or a member of the Proteaceae, now known as *Sinaphe spindulosa* which was also described as a fern, *Polypodium spindulosum*. Nevertheless, these were one of the first plants ever published from Australia.

William Dampier's expedition in 1668 reported the existence of a eucalypt for the first time. Dampier spent three months around the Kimberley coast and made reference to the so-called Dragon Tree. This, in fact, is a bloodwood (*Corymba* sp.). The publication resulting from this trip had a great influence in England and money was gathered for a second expedition. In 1699 at Shark Bay he described plants including the Sturt Desert Pea (*Swainsona formosa*). Dampier, who was not a trained biologist but a gifted writer and keen observer, also described the first Australian wattle. Ultimately, his travel accounts (and their translations) inspired the journeys of Cook, Flinders etc.

James Cook sailing on the Endeavour brought with him some extraordinary naturalists, Joseph Banks and Daniel Solander as well as the gifted illustrator Sydney Parkinson. They collected a large number of specimens on the east coast of Australia. The map they used still had Tasmania connected to the mainland and large parts of the coast unchartered. From this trip, Banks brought back a specimen of *Banksia* which was described by Carolus Linnaeus (Linné) back in Europe. All the plants were illustrated by Parkinson and engraved by Banks and they made up the famous *Florilegium*.
On Cook's second journey, he brought two german botanist, Reinhold and Georg Forster and their work resulted in the first Flora which was presented to the King of England. *Eucalyptus obliqua* was one of the plants collected on this voyage. It was collected on 26 January 1777. (*This day was later declared Australia Day but I don't think it had anything to do with this plant....*). Later it was described by a frenchman and this was the beginnings of a great french botanising in the newly discovered continent. Cook's party also collected the first wattle (*A. botrycephala*) and the waratah (which was first named *Emothrium* and later changed to *Telopea*).
Cook's voyage changed the map of the eastern seaboard dramatically. Many blanks were filled in and his discoveries were quickly translated into german and french.

Louis XVI sponsered the french explorer La Pérouse. He vanished under mysterious circumstances and another ship was dispatched to search for him. La Pérouse was never found. The french botanists D'Entrecasteaux and La Billiardière on these ships collected many plants even though they made very few stops. They illustrated *Epacris impressa*. As they circumnavigated Australia, one stop was visited in different seasons and much information was gained from that. They also described the first Australian fungus.

Eight (!) more french expeditions were sent to Australia. One of these left in 1800 with Thomas Baudin as botanists and Charles Alexander Lesueur as illustrator. This party brought back live animals and plants to Europe. Another party with Peron as main zoologist sailed in 1802 and met Matthew Flinders ship in Encounter Bay. Flinders had shown earlier (on an expedition with Bass) that Tasmania was an island, separate from the mainland. On this voyage of Flinders, Robert Brown was the botanist and a very talented illustrator was on the party as well, Ferdinand Bauer. Bauer drew much from live specimens but did not colour the pictures till he was back in Europe. He sketched the outlines and marked in the shades with a numbering system that allowed him to colour the animals and plants much later (*Sophie brought with her some examples of such sketches in a book illustrating the early naturalists drawings.*

They consisted of black line drawings with a bewildering array of 3-digit numbers in 100s of compartments. The final coloured results were stunning).

Other botanists (e.g. Franz Sieber, William Harvey) came out for quite commercial ends. They collected plants and sold them to botanists in Europe for illustrating and naming.

Until then, no female botanist, collector or traveller had come to Australia, except one female illustrator who came out with a french expedition. Ferdinand von Mueller, the first professional botanist who came to Australia and then stayed here, employed many dedicated female collectors and illustrators (who nevertheless are never mentioned in history books). He wrote ten books. In 1850 the government sponsored an expedition to the interior. Von Mueller went with that party and crossed the continent for the first time. Along the way, he collected and named plants from the completely unknown flora of the Northern Territory.

In summary there have been three periods in Australia's recent botanical explorations:
The first wave consisted of explorers, sailors, medical officers who made fleeting visits and collected haphazardly and found specimens accidentally, then took them home like trophies.

The second wave consisted of Australian residents and scientists collecting many plants but the majority of these was still described overseas. All specimens were sent to Europe, mostly England, France and Germany.

Half way through the last century the third period began in which Australian plants were described by Australian botanists.

This end of Sophie's talk naturally led onto the plants introduced by Europeans. The question was asked if any of these botanists recognised the threat of introduced plants last century? Sophie said that from her readings this was not seen as a problem till after the second world war, in the 20th century.
The problem of what is a weed and what is not, was countered by Sophie when she said - "let's be sensible about this, if you look at it strictly, I am a weed too, a white person intruding into aboriginal land".....loud applause and a great finish to a fantastic talk.....but that was not all.....

Rod Orr knew that Sophie had once been offered the BFNC orchid book but declined it because she found these orchids 'unattractive'. Because of this, Barbara offered Sophie, as a thank you, the brand new BFNC publication on Spiders in the Bendigo district. Her reaction was so swift and clearly negative that in the end she settled for the orchid book, which she found to be quite nice after all.....it was unforgettable.

Jenny Shield – there is somebody out there who needs your guidance about the beauty of spiders!

Native Vegetation on Sutton Grange Road to be protected

Summarised by Bill Holsworth

Our Club was concerned that important habitat would be destroyed if widening of Sutton Grange road proceeded on the basis recommended by the City Council earlier this year. Although the Council considered the submissions made by this Club, and others, last year, and put in place very important modifications and conditions to the road-widening Permit, we considered more could be done.
The revised plan approved by the City on 11 Feb 2002 included planting 1500 indigenous trees and shrubs along the roadside and in adjacent private land. However it also allowed for the removal of 17 trees. Since some of these trees were very old, contained hollows, and provided a corridor for wildlife we asked to meet with some of the Council and staff. Following and early morning meeting on 22 February and a letter to the City in early March, we received a favourable response.

Tree #1, one of the best and oldest trees, would not be cut and it would be nominated for inclusion on the Planning Scheme Heritage Overlay. Tree #4 (dead but with many hollows) would be relocated a short distance. Trees #2, 3, and 5 would remain and nest boxes would be put in these trees to compensate for the essential removal of the other trees.
We view the final result as a very satisfactory outcome of the negotiations and thank the Cr Whelan and David Beard for their assistance.

Diary

The General, Bird Observers Group and Mammal Study Group meetings are held at the Golden Square Senior Citizens Building, Old High Street, Golden Square, unless otherwise indicated.

General Meeting

Wednesday, April 10 7.00pm
Note earlier starting time
This month a workshop will be held prior to the main speaker. The topic will be "Introduction to Aquatic Plants of Central Victoria" and it will be conducted by Matthew Comer.
8.00pm: The main speaker on this night is Catherine Fraser and the topic is Catherine's PhD Thesis "Secret Life of Compost". A very promising talk....

Wednesday, May 8 7.30pm
This month, Peter Johnson and Paul Gullan will talk about the 'Box-Ironbark Living Records Project'.

Wednesday, June 12 7.30pm
Ern Perkins, who has been very active in the box-ironbark campaign will talk about 'Monitoring Changes in Box-Ironbark Forests'.

Mammal Study Group

Wednesday, April 24 7.30pm
Hollows, their significance and occupants. Slides and overhead projector will be used to contribute to general discussion of knowledge and observations.
(For other planned meetings, see page 5)

Past, Present and Future Bird Observers Group Members.....

Wednesday, April 24 6:30pm
BFNC Clubrooms
(preceding the Mammal group meeting)

Could all people interested in birds please meet to discuss future options for birding activities.

Highway Clean-Up

The next Highway Clean-Up, at the seven sisters section of the Midland Highway at Huntly, will be at 10am on Sunday 14th April.

Gloves, bags and safety vests will be provided.

Please ring Matthew Comer (54322380) if you have any questions.

Wildlife Rescue & Information Network Inc.
W.R.I.N. is an organisation dedicated to the care of orphaned, sick or injured native animals.
It is fully endorsed by the Dept of Natural Resources and Environment.
Please call our Emergency Number for Help for Fauna in Need. Phone: 0419 356433

WRIN's next meeting will be in the BFNC Clubrooms,
Sunday 7th April, Meeting starts at 1pm.
The speaker will begin at **2.00pm.**
Speaker: Richard Naisbitt,
Keeper-in- charge of birds of prey (Healesville).
The topic is **"Raptors".**

There will be a $2.00 to assist with expenses and a plate of nibbles would be appreciated.
You will enjoy listening to Richard.
See also the article by Brenda Cheers, page 3 of the March *Whirrakee.*

Victoria's Plants first revealed: Robert Brown in Port Phillip 1802
A symposium celebrating the bicentenary of the voyage of Matthew Flinders to New Holland in 1801 - 1803, and the visit to Port Phillip by Robert Brown and Ferdinand Bauer in April 1802.
18th April KPMG Conference Room, Level 5
161 Collins Street Melbourne, 2-8pm
More information: Karen Lockyer 03 92522355

Opening Ceremony The BEEC
The Bird Observers Club of Australia is officially opening the new premises

Saturday 13 April 2002 at 11.30am.
See March *Whirrakee* for details, including activities planned for non-Melbourne members.